

**REMARKS**

After entry of the instant Amendment, claims 1-14 and 19-21 are pending in the instant application, with claims 1, 10 and 19 in independent form. Independent claims 1, 10, and 19 have been amended to further claim the presence of an organo-titanium compound present in the claimed composition. In view of the introduction of the organo-titanium compound into claim 1, claim 7 has been amended to account for the antecedent basis of the organo-titanium compound in claim 1. Claim 7 has also been amended to delete the word “further”, as requested by the Examiner. Claim 8 has been amended to specify suitable organo-titanium compounds, support for which amendments can at least be found in paragraph [0047] on page 14 of the original application as filed. Claims 15-18 are cancelled. Claim 22 was previously cancelled. Claims 23 and 24 are new, and are identical to dependent claim 8 but for different dependency. Table 1 of the specification of the application has also been reproduced to show the entire table, which was cut off in the prior Amendment as noted by the Examiner. No new amendments are made to Table 1. The Applicants respectfully submit that no new matter is added through the amendments to the claims.

In the instant Office Action, the Examiner has objected to certain informalities in the specification. The Applicants respectfully submit that the new Table 1 provided herein adequately addresses the basis for the Examiner’s objections such that the Applicants respectfully request the Examiner to withdraw the objection to the specification.

Claims 7, 8, and 15-18 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Claims 1-4, 6-9, 10, 12, 13, 15, 17, and 18 stand rejected

under 35 U.S.C. §102(b) as being anticipated by Nagaoka (U.S. Patent No. 5,378,406). Claims 5, 11, 14, 16, and 19-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nagaoka in view of Insley (U.S. Patent No. 3,995,184). In view of the amendments to claim 7, the Applicants respectfully submit that the rejections under 35 USC §112, second paragraph, are overcome and must be withdrawn. In view of the amendments to independent claims 1, 10, and 19, and the cancellation of claims 15-18, the Applicants respectfully submit that the rejections under 35 U.S.C. §102(b) over Nagoaka, and under 35 U.S.C. §103(a) over Nagoaka in view of Insley, have been overcome for the following reasons:

- 1) Nagoaka does not explicitly or inherently teach a source of ferrous ions such that Nagoaka does not anticipate independent claims 1, 10, and 19 under 35 U.S.C. §102(b),
- 2) While Nagoaka does teach an organo-titanium compound as a catalyst, selection of a source of ferrous ions from the combined teachings of Nagoaka and Insley, along with selection of organo-titanium compounds and the specifically claimed non-ferrous metal salts from Nagoaka, is not from a finite number of identified predictable solutions presented by the combined teachings of Nagoaka and Insley so as to amount to an obvious combination under 35 U.S.C. §103(a); and
- 3) Unexpected results are attained with the claimed combination so as to provide objective indicia of non-obviousness of the invention claimed in independent claims 1, 10, and 19.

#### **As to the Rejection of Dependent Claims 7, 8 and 15-18 Under 35 U.S.C. §112**

The Applicants have amended claim 7 in the manner suggested by the Examiner for purposes of overcoming this rejection. Claim 8 depends from claim 7 and was rejected due to

such dependency. Claims 15-18 have been cancelled such that the indefiniteness rejections of those claims are moot. It is believed that no further comment is necessary to support Applicants' position that all indefiniteness rejections of the claims are overcome.

**As to Anticipation of Independent Claims 1 and 10**

The Applicants know the Examiner to be well aware of the standards for establishing anticipation of a claim, and the Applicants do not recite said standards at length. The Applicants note that, while anticipation requires that a reference disclose or teach every element of a claim (see MPEP 2131), anticipation can be established through either explicit or inherent disclosures in the prior art. Inherent anticipation is clearly not a consideration in the instant case because such standards require that a feature necessarily be present in the prior art, and because the genus of "iron oxide" includes ferric ions such that a source of ferrous ions is not necessarily present within the disclosure of iron oxide in Nagoaka. While a disclosed genus may anticipate a claimed species, anticipation requires that the species be "at once envisaged" by the disclosed genus. However, even so, evidence of unexpected results may render the claims both not anticipated and nonobvious (see MPEP 2131.03(II.) which addresses anticipation of a claimed range and indicates evidence of unexpected results may render claims nonobvious, and the question of "sufficient specificity" is similar to the question of "clearly envisaging" a species from a generic teaching). Because there is no explicit disclosure of a source of ferrous ions, and because unexpected results are shown in the instant application with regard to reduction in discoloration when the source of ferrous ions is used, the Applicants respectfully submit that independent claims 1 and 10 would **not** be anticipated even if the instant amendments were not made to said claims.

**As to Obviousness of Independent Claims 1 and 10 in View of Nagoaka and Insley**

With regard to obviousness of independent claims 1 and 10 over the combined teachings of Nagoaka and Insley, the Applicants respectfully submit that the instantly claimed components would have to be selected from an unduly broad category of components such that the Examiner cannot find that the instant invention can result from selection of a finite number of identified, predictable solutions. *KSR* has provided significant guidance for establishing obviousness under such circumstances. In particular, “when there is motivation to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” See MPEP 2143 citing *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742. The MPEP provides guidance in regard to the subject holding of *KSR*. In particular, the Applicants are likely to overcome rejections relying upon the subject holding of *KSR* when what would have been ‘obvious to try’ would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gives either no indication of which parameters are critical or no direction as to which of many possible choices.... In others, what was ‘obvious to try’ was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it.” See MPEP 2145(X.)(B.).

In the instant case, significant selection of various parameters is necessary to arrive at the instant invention based upon the combined teachings of Nagoaka and Insley, including filler type, amount of the non-ferrous metal salt, and the type of catalyst, and there is no indication whatsoever that any of said parameters are critical, and there is further no direction as to which variable to set base on many possible choices. In fact, Nagoaka is concerned with anti-fungal properties of the composition taught therein, and the focus of Nagoaka is on extending the period of effectiveness of the non-ferrous metal salt included in the composition disclosed therein by adding a benzimidazolylcarbamate compound into the composition. Addition of a filler is merely an afterthought within the disclosure of Nagoaka, and there is nothing to suggest advantages of utilizing a particular filler. Coupled with the fact that Applicants have shown reduction in color when even very small amounts of non-ferrous metal salt are used in combination with the source of ferrous ions in a composition including organo-titanium compounds (which are described in the background of the instant application as a source of yellowing), the Applicants respectfully submit that selection of the instantly claimed components, and amount of the non-ferrous salt, is not obvious in view of the combined teachings of Nagoaka and Insley.

#### **As to Unexpected Results Attained Through the Instant Invention**

A significant finding, for purposes of the instant invention, was that lower than expected amounts of the non-ferrous metal salt could be used to reduce discoloration in the subject compounds when used in conjunction with a source of ferrous ions. In particular, the Examples demonstrate that as little as 5 ppm, or 0.0005%, of non-ferrous metal salt significantly reduce discoloration in an organo-titanium catalyzed composition, whereas the

Examiner has recognized that the prior art only contains examples that support a lower limit of 0.1% by weight of non-ferrous metal salts to be effective for purposes of reducing fungal growth. Even so, there is no recognition in Nagoaka that discoloration attributable to organo-titanium catalysts can be reduced by the presence of the non-ferrous metal salt.

In view of the foregoing, the Applicants respectfully submit that independent claims 1, 10, and 19 are novel over the teachings of Nagoaka, and are non-obvious over the combined teachings of Nagoaka and Insley such that those claims are in condition for allowance. Because claims 1, 10, and 19 are in condition for allowance, the Applicants respectfully submit that the claims that depend from claims 1, 10, or 19, respectively, are also in condition for allowance. Additionally, the Applicants note that the subject matter of claims 8, 23, and 24 can be found nowhere within the disclosure or teachings of Nagoaka or Insley.

Because the due date for response with payment for a two-month extension of time was Sunday, August 8, 2010, the Applicants respectfully submit that this Amendment is submitted with the appropriate fee for a two-month extension of time. Further, because claims 15-18 have been cancelled, the Applicants respectfully submit that no fees are presently due for new claims 23 and 24.

The appropriate fee for the two-month extension of time is included herewith, and it is believed that no further fees are presently due. However, the Commissioner is authorized to charge our deposit account no. 08-2789 for any additional fees or credit the account for any overpayment.

Respectfully submitted,

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Date: August 9, 2010

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